

TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>
<i>VOLUME I</i>		
DESIGN CONTROL DOCUMENT INTRODUCTION		
1.0	Scope and Purpose of the Design Control Document.....	Intro-1
1.1	Tier 1 Information.....	Intro-1
1.2	Tier 2 Information.....	Intro-2
1.3	Relationship of the Tier 1 Information to the Tier 2 Information.....	Intro-2
1.4	Uses of the Design Control Document.....	Intro-2
2.0	Effect of the Tier 1 Information	Intro-3
2.1	Compliance with Tier 1 Information.....	Intro-3
2.2	Design Descriptions	Intro-3
2.3	Inspections, Tests, Analyses and Acceptance Criteria	Intro-3
2.4	Tier 1 Site Parameters	Intro-4
2.5	Tier 1 Interface Requirements.....	Intro-4
3.0	Effect of the Tier 2 Information	Intro-5
3.1	Compliance with the Tier 2 Information	Intro-5
3.2	COL Information Items.....	Intro-5
3.3	Tier 2 Interface Requirements.....	Intro-5
3.4	Conceptual Designs	Intro-5
3.5	Plant-Specific Changes to Designated Information in the Tier 2 Information	Intro-6
3.6	Treatment of Probabilistic Risk Assessment Information	Intro-6
4.0	References	Intro-6

LIST OF TABLES

<u>Table No.</u>	<u>Title</u>	<u>Page</u>
1-1	Index of AP1000 Tier 2 Information Requiring NRC Approval for Change	Intro-7
1-2	Piping Design Acceptance Criteria.....	Intro-16

DESIGN CONTROL DOCUMENT INTRODUCTION

1.0 SCOPE AND PURPOSE OF THE DESIGN CONTROL DOCUMENT

This Design Control Document (DCD) is a repository of information comprising the AP1000^{TM(*)} Standard Plant Design. The design control document also provides that design-related information to be incorporated by reference into Appendix D to 10 CFR Part 52 (the AP1000 design certification rule).

Applicants for a combined license pursuant to 10 CFR 52 must ensure that Appendix D to 10 CFR Part 52 and the associated Statements of Consideration are used when making licensing decisions relevant to the AP1000 Standard Plant Design.

Further sections of this introduction summarize the contents and use of the design control document. The design control document contains this introduction, the Tier 1 Information and the Tier 2 Information for the AP1000 Standard Plant Design.

Detailed information on the application and use of the AP1000 design control document may be found in Appendix D to 10 CFR Part 52.

If there is a conflict between this introduction and the AP1000 design certification rule, the AP1000 design certification rule controls.

1.1 Tier 1 Information

Tier 1 means the portion of the design-related information contained in the AP1000 design control document that is approved and certified by the NRC. Tier 1 information includes:

- Definitions and general provisions;
- Design descriptions;
- Inspections, tests, analyses, and acceptance criteria (ITAAC);
- Significant site parameters; and
- Significant interface requirements between the AP1000 Standard Plant Design and systems that are wholly or partially outside the scope of the AP1000 Standard Plant Design

The Tier 1 Information includes a table of contents, a figure legend and an abbreviation list.

* AP1000 is a trademark of Westinghouse Electric Company LLC

1.2 Tier 2 Information

Tier 2 means the portion of the design-related information contained in the AP1000 Design Control Document that is approved but not certified by the NRC. Tier 2 information includes:

- Information required by 10 CFR 52.47, with the exception of generic technical specifications and conceptual design information;
- Information required for a final safety analysis report under 10 CFR 50.34;
- Supporting information on the inspections, tests, and analyses that will be performed to demonstrate that the acceptance criteria in the ITAAC have been met; and
- Combined license (COL) information items which identify certain matters that shall be addressed in the site-specific portion of the final safety analysis report (FSAR) by an applicant who references the AP1000 design certification rule

Each volume of the Tier 2 Information includes a master table of contents and each chapter contains a chapter specific table of contents.

1.3 Relationship of the Tier 1 Information to the Tier 2 Information

The design descriptions, interface requirements, and site parameters in Tier 1 are derived from Tier 2 information.

Compliance with Tier 2 is required, but generic changes to and plant-specific departures from Tier 2 are governed by the AP1000 design certification rule. Compliance with Tier 2 provides a sufficient, but not the only acceptable, method for complying with Tier 1. Compliance methods differing from Tier 2 must satisfy the change process in Section VIII of the AP1000 design certification rule.

1.4 Uses of the Design Control Document

An applicant for a license that wishes to reference the AP1000 design certification rule shall, in addition to complying with the requirements of 10 CFR 52.77, 52.78, and 52.79, comply with the following requirements:

- Incorporate by reference, as part of its application, the AP1000 design certification rule;
- Include, as part of its application:
 - A plant-specific design control document containing the same information and utilizing the same organization and numbering as the generic design control document for the AP1000 Standard Plant Design, as modified and supplemented by the applicant's exemptions and departures;
 - The reports on departures from and updates to the plant-specific design control document required by Section X of the AP1000 design certification rule;

- Plant-specific technical specifications, consisting of the generic and site-specific technical specifications, that are required by 10 CFR 50.36 and 50.36a;
- Information demonstrating compliance with the site parameters and interface requirements;
- Information that addresses the COL information items; and
- Information required by 10 CFR 52.47(a) that is not within the scope of the AP1000 design certification rule.
- Physically include, in the plant-specific design control document, the proprietary information referenced in the AP1000 design control document.

The Commission reserves the right to determine in what manner the AP1000 design certification rule may be referenced by an applicant for a construction permit or operating license under 10 CFR Part 50.

2.0 EFFECT OF THE TIER 1 INFORMATION

The following provisions describe the scope and effect of the Tier 1 Information.

2.1 Compliance with Tier 1 Information

All of the information in the Tier 1 Information is approved by the NRC and is applicable to a license application for a license that references the AP1000 design certification rule, and is among the "matters resolved" under 10 CFR 52.63 (a)(4). The provisions and methods specified in the Tier 1 Information shall be complied with unless a plant specific exemption is granted by the NRC or a change is made to the Tier 1 Information in accordance with the change process specified in Section VIII of the AP1000 design certification rule.

2.2 Design Descriptions

The Design Descriptions pertain only to the design of structures, systems and components of an AP1000 Standard Plant Design and not to their operation, maintenance and administration. In the event of an inconsistency between the Design Descriptions and the Tier 2 Information, the Design Descriptions shall govern.

2.3 Inspections, Tests, Analyses and Acceptance Criteria

An applicant or licensee who references the AP1000 design certification rule shall perform and demonstrate conformance with the ITAAC before fuel load. With respect to activities subject to an ITAAC, an applicant for a license may proceed at its own risk with design and procurement activities, and a licensee may proceed at its own risk with design, procurement, construction, and preoperational activities, even though the NRC may not have found that any particular ITAAC has been satisfied.

In the event that an activity is subject to an ITAAC, and the applicant or licensee who references the AP1000 design certification rule has not demonstrated that the ITAAC has been satisfied, the applicant or licensee may either take corrective actions to successfully complete that ITAAC, request an exemption from the ITAAC in accordance with Section VIII of the AP1000 design certification rule and 10 CFR 52.97(b), or petition for rulemaking to amend the AP1000 design certification rule by changing the requirements of the ITAAC, under 10 CFR 2.802 and 52.97(b).

In accordance with 10 CFR 52.99 and 52.103(g), the Commission shall find that the acceptance criteria in the ITAAC for the license are met before fuel load.

After the Commission has made the finding required by 10 CFR 52.103(g), the ITAAC do not, by virtue of their inclusion within the design control document, constitute regulatory requirements either for licensees or for renewal of the license; except for specific ITAAC, which are the subject of a Section 103(a) hearing, their expiration will occur upon final Commission action in such proceeding. However, subsequent modifications must comply with the Tier 1 and Tier 2 design descriptions in the plant-specific design control document unless the licensee has complied with the applicable requirements of 10 CFR 52.97 and Section VIII of the AP1000 design certification rule.

2.4 Tier 1 Site Parameters

Site parameters are specified in the Tier 1 Information to establish the bounding parameters to be used in the selection of a suitable site for the facility referencing the AP1000 certified design. Since the Tier 1 Information Site Parameters were used in the bounding evaluations of the certified design, they define the requirements for the design that must be met to ensure that a facility built on the site remains in conformance with the design certification. In the event that an inconsistency between the Tier 1 Information Site Parameters and the Tier 2 Information, the Tier 1 Information Site Parameters shall govern.

2.5 Tier 1 Interface Requirements

The Tier 1 Interface Requirements describe the significant design provisions for interfaces between the AP1000 Standard Plant Design and structures, systems and components that are wholly or partially outside the scope of the AP1000 Standard Plant Design. Tier 1 Interface Requirements also define the significant attributes and performance characteristics that the out-of-scope portion of the plant must have in order to support the in-scope portion of the design. The FSAR shall contain provisions which implement the Interface Requirements in accordance with 10 CFR 52.79(b). Any plant-specific application for a COL shall contain additional ITAAC corresponding to these implementing provisions. In the event of an inconsistency between the Tier 1 Interface Requirements and the Tier 2 Information, the Tier 1 Interface Requirements shall govern.

3.0 EFFECT OF THE TIER 2 INFORMATION

The following provisions describe the scope and effect of the Tier 2 Information.

3.1 Compliance with the Tier 2 Information

All of the information in the Tier 2 Information is approved by the NRC and, with the exceptions noted in Sections 3.2 and 3.4 below, is applicable to a license that references the AP1000 design certification rule and is among the "matters resolved" under 10 CFR 52.63(a)(4). Compliance with the Tier 2 Information is a sufficient, but not necessarily the only, method of complying with the Tier 1 Information. The provisions and methods specified in the Tier 2 Information shall be followed unless a change is made in accordance with Section VIII of the AP1000 design certification rule.

3.2 COL Information Items

Combined license (COL) information items identify certain matters that shall be addressed in the site-specific portion of the final safety analysis report (FSAR) by an applicant who references the AP1000 design certification rule. These items constitute information requirements but are not the only acceptable set of information in the FSAR. An applicant may depart from or omit these items, provided that the departure or omission is identified and justified in the FSAR. After issuance of a construction permit or COL, these items are not requirements for the licensee unless such items are restated in the FSAR.

A summary of the AP1000 COL Information Items is provided in Table 1.8-2 of the Tier 2 Information.

3.3 Tier 2 Interface Requirements

The Tier 2 Interface Requirements describe the design provisions for interfaces between the AP1000 Standard Plant Design and structures, systems and components that are wholly or partially outside the scope of the AP1000 Standard Plant Design. Tier 2 Interface Requirements, summarized in Table 1.8-1 of the Tier 2 Information, also define the attributes and performance characteristics that the out-of-scope portion of the plant must have in order to support the in-scope portion of the design. The FSAR shall contain provisions which implement the Tier 2 Interface Requirements in accordance with 10 CFR 52.79(b). In the event of an inconsistency between the Tier 1 Interface Requirements and the Tier 2 Interface Requirements, the Tier 1 Interface Requirements shall govern.

3.4 Conceptual Designs

Conceptual designs for those portions of the plant that are outside the scope of the AP1000 Standard Plant Design are described and designated as out-of-scope in various places in the Tier 2 Information. As provided by 10 CFR 52.47(a)(1)(ix), these conceptual designs are not a part of the design certification for the AP1000 Standard Plant Design and do not impose requirements applicable to a COL, nor an application for a COL, that references the AP1000 design certification rule. Those portions of the AP1000 Standard Plant Design for which conceptual designs are

included in the Tier 2 Information are identified by double brackets and listed in Section 1.8 of the Tier 2 Information.

3.5 Plant-Specific Changes to Designated Information in the Tier 2 Information

*Tier 2** means the portion of the Tier 2 information, designated as such in the AP1000 design control document, which is subject to the change process in Section VIII of the AP1000 design certification rule. This designation expires for some Tier 2* information under Section VIII of the AP1000 design certification rule.

An applicant who references the AP1000 design certification rule may not depart from Tier 2* information, which is designated with italicized text or brackets and an asterisk in the AP1000 design control document, without NRC approval. The departure will not be considered a resolved issue, within the meaning of Section VI of the AP1000 design certification rule and 10 CFR 52.63(a)(4).

The AP1000 Tier 2* information, summarized in Table 1-1 of this introduction, is designated with italicized text in the Tier 2 Information. Certain figures that are indicated to be Tier 2* may contain information beyond that that is considered to be Tier 2*. A review of the text referencing the figure may be necessary to determine what information on the figure is considered to be Tier 2*. The AP1000 Tier 2* information for which the Tier 2* designation expires when the COL holder first achieves 100% power operation is indicated in Table 1-1 of this introduction.

3.6 Treatment of Probabilistic Risk Assessment Information

A design-specific Probabilistic Risk Assessment (PRA) for the AP1000 Standard Plant Design was submitted as a part of the application for design certification as required by 10 CFR 52.47. One purpose of the PRA was to develop insights for the design and its features. Significant insights that resulted from the PRA are identified in Section 19.59 of the Tier 2 Information. However, the detailed methodology and quantitative portions of the design-specific PRA are not included in the Design Control Document because it is anticipated that this material will be subject to modifications and refinements as the detailed design is completed and the as-built plant parameters and new methodology become available.

4.0 References

1. APP-GW-GLR-013, "Safety Class Piping Design Specifications and Design Reports Summary."

Table 1-1
Index of AP1000 Tier 2 Information Requiring NRC Approval for Change

Item	Expiration at First Full Power	Tier 2 Reference
Dimensions for Nuclear Island Structures	Yes	3.7.1.4 Table 3.7.1-2 Figure 3.7.1-14
Nuclear Island Key Structural Dimensions	Yes	3.7.2 Figure 3.7.2-12
Polar Crane Parked Orientation	Yes	3.7.2.3.2
Containment Vessel Design Characteristics and Spacing Between Each Pair of Ring Supports	Yes	3.8.2.1.1
2001 Edition of ASME Code, Section III, including 2002 Addenda	Yes	3.8.2.2 3.8.2.5 5.2.1.1
ASME Code Case N-284-1	Yes	3.8.2.2 3.8.2.5
Use of ACI-349-01	Yes	3.8.3.2 3.8.4.2 3.8.4.4.1 3.8.4.5 3.8.4.5.1 3.8.5.5 Table 3.8.4-2
Use of AISC N690-1994	Yes	3.8.3.2 3.8.4.2 3.8.4.4.1 3.8.4.5 3.8.4.5.2 Table 3.8.4-1
Use of AISI	Yes	3.8.4.4.1 3.8.4.5
Design Summary of Critical Sections Inside Containment	Yes	3.8.3.5.8.1 3.8.3.5.8.2 3.8.3.5.8.3 Table 3.8.3-3 Table 3.8.3-4 Table 3.8.3-5 Table 3.8.3-6 Table 3.8.4-1 Figure 3.8.3-1 Figure 3.8.3-2

Table 1-1 (Cont.)
Index of AP1000 Tier 2 Information Requiring NRC Approval for Change

Item	Expiration at First Full Power	Tier 2 Reference
Design Summary of Critical Sections Inside Containment (Cont.)		Figure 3.8.3-8 Figure 3.8.3-14 Figure 3.8.3-15 Figure 3.8.3-17 Figure 3.8.3-18
Design Summary of Critical Sections Outside Containment	Yes	3.8.4.5.4 Figure 3.8.4-2 Figure 3.8.4-4 Figure 3.8.5-3 App 3H.1 App 3H.2 App 3H.3 App 3H.3.1 App 3H.3.2 App 3H.3.3 App 3H.3.4 App 3H.4 App 3H.4.1 App 3H.5 App 3H.5.1 App 3H.5.1.1 App 3H.5.1.2 App 3H.5.1.3 App 3H.5.1.4 App 3H.5.1.5 App 3H.5.2 App 3H.5.2.1 App 3H.5.2.2 App 3H.5.3 App 3H.5.3.1 App 3H.5.4 App 3H.5.5 App 3H.5.5.1 App 3H.5.6 App 3H.5.6.1 App 3H.5.6.3 Table 3H.5-1 Table 3H.5-3 Table 3H.5-5 Table 3H.5-7

Table 1-1 (Cont.)
Index of AP1000 Tier 2 Information Requiring NRC Approval for Change

Item	Expiration at First Full Power	Tier 2 Reference
Design Summary of Critical Sections Outside Containment (Cont.)		Table 3H.5-8 Table 3H.5-9 Table 3H.5-10 Table 3H.5-11 Table 3H.5-12 Table 3H.5-13 Figure 3H.2-1 Figure 3H.5-1 Figure 3H.5-2 Figure 3H.5-3 Figure 3H.5-4 Figure 3H.5-5 Figure 3H.5-6 Figure 3H.5-7 Figure 3H.5-8 Figure 3H.5-9 Figure 3H.5-10 Figure 3H.5-12
Design Summary of Critical Sections for Nuclear Island Basemat	Yes	3.8.5.4.4 Table 3.8.5-3
Seismic Qualification Standards	Yes	3.10.1.1
Methods and Procedures for Qualifying Electrical Equipment, Instrumentation, and Mechanical Components	Yes	3.10.2
Experienced-Based Qualification	Yes	3.10.6
MOV Design and Qualification	Yes	5.4.8.1.2
Other Power-Operated Valves Design and Qualification	Yes	5.4.8.1.3
Motor Operated Valves	Yes	5.4.8.5.2
Power Operated Valves	Yes	5.4.8.5.3
N-284-1 Metal Containment Shell Buckling Design Methods, Section III, Division I Class MC	Yes	Table 5.2-3
WCAP-14605, "Westinghouse Setpoint Methodology for Protection Systems, AP600," Rev 0	Yes	Chapter 7 Table 1.6-1
WCAP-16097-P-A, "Common Qualified Platform," Rev 0	Yes	Chapter 7 Table 1.6-1
WCAP-16096-NP-A, "Software Program Manual for Common Q Systems," Rev 01A	Yes	Chapter 7 Table 1.6-1
Verification and Validation	Yes	7.1.2.14

Table 1-1 (Cont.)
Index of AP1000 Tier 2 Information Requiring NRC Approval for Change

Item	Expiration at First Full Power	Tier 2 Reference
Hard-wired DAS manual actuation	No	7.7.1.11
Nuclear Island Fire Areas	No	Figure 9A-1
Turbine Building Fire Areas	No	Figure 9A-2
Annex I & II Building Fire Areas	No	Figure 9A-3
Radwaste Building Fire Areas	No	Figure 9A-4
Diesel Generator Building Fire Areas	No	Figure 9A-5
Natural Circulation Test	First Plant Only	14.2.5
Description of "First Three Plant Tests"	Third Plant	14.2.5
Verification of proper operation of core makeup tanks in recirculation mode	Third Plant	14.2.9.1.3
Verification of automatic depressurization during hot functional testing	Third Plant	14.2.9.1.3
Verification of proper operation of core makeup tanks to transition to draindown mode	Third Plant	14.2.9.1.3
Passive Residual Heat Removal Heat Exchanger Natural Circulation Test	First Plant Only	14.2.10.3.7
First-Plant-Only and Three-Plant-Only Tests	As Discussed	14.4.6
10 CFR 50.46 Criteria for NOTRUMP Homogeneous Sensitivity Model	No	15.6.5.4B.2.2
10 CFR 50.46 Criteria for Critical Heat Flux Assessment	No	15.6.5.4B.2.3
WCAP-14396, "Man-in-the-Loop Test Plan Description," Rev 3	No	Table 1.6-1
WCAP-15860, "Programmatic Level Description of the AP1000 Human Factors Verification and Validation Plan," Rev 2	No	Table 1.6-1
WCAP-14651, "Integration of Human Reliability Analysis with Human Factors Engineering Design Implementation Plan," Rev 2	No	Table 1.6-1
WCAP-14695, "Description of the Westinghouse Operator Decision Making Model and Function Based Task Analysis Methodology," Rev 0	No	Table 1.6-1
WCAP-15847, "AP1000 Quality Assurance Procedures Supporting NRC review of AP1000 SSAR Sections 18.2 and 18.8," Rev 1	No	Table 1.6-1
Basis for Human Factors Engineering Program	No	18.1

Table 1-1 (Cont.)
Index of AP1000 Tier 2 Information Requiring NRC Approval for Change

Item	Expiration at First Full Power	Tier 2 Reference
NUREG-0711, "Human Factors Engineering Program Review Model," July 1994 WCAP-14651, "Integration of Human Reliability Analysis with Human Factors Engineering Design Implementation Plan," Rev 2 WCAP-15860, "Programmatic Level Description of the AP1000 Human Factors Verification and Validation Plan," Rev 2	No	18.1.1
NUREG-0711, "Human Factors Engineering Program Review Model," July 1994	No	18.2.1.2
Applicable Facilities	No	18.2.1.3
Applicable Human Systems Interfaces	No	18.2.1.4
Applicable Plant Personnel	No	18.2.1.5
Technical Basis NUREG-0711, "Human Factors Engineering Program Review Model," July 1994	No	18.2.1.6
Responsibility of Human System Interface Design Team	No	18.2.2.1
Composition of HFE Design Team	No	18.2.2.3
Action Item Tracking	No	18.2.3.1
Subcontractor Efforts WCAP-15847, "AP1000 Quality Assurance Procedures Supporting NRC review of AP1000 SSAR Sections 18.2 and 18.8," Rev 1	No	18.2.3.5
General Process and Procedures for Design Review of HFE Products	No	18.2.4
HFE Technical Program and Milestones NUREG-0711, "Human Factors Engineering Program Review Model," July 1994 NUREG-0711, "Human Factors Engineering Program Review Model," Rev 1	No	18.2.5
NUREG-0711, "Human Factors Engineering Program Review Model," July 1994 WCAP-15847, "AP1000 Quality Assurance Procedures Supporting NRC review of AP1000 SSAR Sections 18.2 and 18.8," Rev 1 NUREG-0711, "Human Factors Engineering Program Review Model," Rev 1	No	18.2.7

Table 1-1 (Cont.)
Index of AP1000 Tier 2 Information Requiring NRC Approval for Change

Item	Expiration at First Full Power	Tier 2 Reference
Human System Interface Design Team Process	No	Figure 18.2-1
AP600 Task Analysis Implementation Plan NUREG-0711, "Human Factors Engineering Program Review Model," July 1994	No	18.5
Task Analysis Scope WCAP-14651, "Integration of Human Reliability Analysis with Human Factors Engineering Design Implementation Plan," Rev 2	No	18.5.1
Task Analysis Implementation Plan	No	18.5.2
Function-Based Task Analysis WCAP-14695, "Description of the Westinghouse Operator Decision Making Model and Function Based Task Analysis Methodology," Rev 0	No	18.5.2.1
NUREG-0711, "Human Factors Engineering Program Review Model," July 1994 WCAP-14695, "Description of the Westinghouse Operator Decision Making Model and Function Based Task Analysis Methodology," Rev 0 WCAP-14651, "Integration of Human Reliability Analysis with Human Factors Engineering Design Implementation Plan," Rev 2	No	18.5.5
Integration of Human Reliability Analysis with HFE WCAP-14651, "Integration of Human Reliability Analysis with Human Factors Engineering Design Implementation Plan," Rev 2	No	18.7
WCAP-14651, "Integration of Human Reliability Analysis with Human Factors Engineering Design Implementation Plan," Rev 2	No	18.7.2
Human System Interface Design WCAP-14695, "Description of the Westinghouse Operator Decision Making Model and Function Based Task Analysis Methodology," Rev 0 WCAP-15860, "Programmatic Level Description of the AP1000 Human Factors Verification and Validation Plan," Rev 2	No	18.8

Table 1-1 (Cont.)
Index of AP1000 Tier 2 Information Requiring NRC Approval for Change

Item	Expiration at First Full Power	Tier 2 Reference
Design Guidelines WCAP-15860, "Programmatic Level Description of the AP1000 Human Factors Verification and Validation Plan," Rev 2	No	18.8.1.2
Man-in-the-Loop Test Plan to Obtain Feedback from Prototype Design Products WCAP-14396, "Man-in-the-Loop Test Plan Description," Rev 3	No	18.8.1.4
HSI Design Provides Necessary Alarms, Displays, and Controls WCAP-15860, "Programmatic Level Description of the AP1000 Human Factors Verification and Validation Plan," Rev 2	No	18.8.1.7
Operator Decision-Making Model Used by Task Analysis Activities WCAP-14695, "Description of the Westinghouse Operator Decision Making Model and Function Based Task Analysis Methodology," Rev 0	No	18.8.1.8
Critical Human Actions and Risk-Important Tasks WCAP-14651, "Integration of Human Reliability Analysis with Human Factors Engineering Design Implementation Plan," Rev 2	No	18.8.1.9
Safety Parameter Display System 10 CFR 50.34(f)(2)(iv) NUREG-0737, Supplement 1, "Requirements for Emergency Response Capability"	No	18.8.2
Implementation Plan for Integrating Human Reliability Analysis with HFE WCAP-14651, "Integration of Human Reliability Analysis with Human Factors Engineering Design Implementation Plan," Rev 2	No	18.8.2.1
Display of Safety Parameters WCAP-14695, "Description of the Westinghouse Operator Decision Making Model and Function Based Task Analysis Methodology," Rev 0	No	18.8.2.2
Safety Parameter Display System HFE NUREG-0711, "Human Factors Engineering Program Review Model," July 1994	No	18.8.2.5

Table 1-1 (Cont.)
Index of AP1000 Tier 2 Information Requiring NRC Approval for Change

Item	Expiration at First Full Power	Tier 2 Reference
Minimum Information, Safety Parameter Display System Design NUREG-1342, "A Status Report Regarding Industry Implementation of Safety Parameter Display Systems"	No	18.8.2.6
Main Control Area Mission and Major Tasks Regulatory Guide 1.97	No	18.8.3.2
Remote Shutdown Workstation Mission and Major Tasks	No	18.8.3.4
Technical Support Center Mission and Major Tasks Technical Support Center Location NUREG-0737, Supplement 1, "Requirements for Emergency Response Capability"	No	18.8.3.5
WCAP-14651, "Integration of Human Reliability Analysis with Human Factors Engineering Design Implementation Plan," Rev 2 WCAP-15860, "Programmatic Level Description of the AP1000 Human Factors Verification and Validation Plan," Rev 2 WCAP-14695, "Description of the Westinghouse Operator Decision Making Model and Function Based Task Analysis Methodology," Rev 0 10 CFR 50.34(f)(2)(iv) NUREG-0737, Supplement 1, "Requirements for Emergency Response Capability" NUREG-0711, "Human Factors Engineering Program Review Model," July 1994 NUREG-1342, "A Status Report Regarding Industry Implementation of Safety Parameter Display Systems" WCAP-14396, "Man-in-the-Loop Test Plan Description," Rev 3	No	18.8.6
Human Performance Issues to be Addressed by HSI Design	No	Table 18.8-1
Human Factors Engineering Verification and Validation WCAP-15860, "Programmatic Level Description of the AP1000 Human Factors Verification and Validation Plan," Rev 2	No	18.11.2
Inventory of Displays, Alarms, and Controls	No	18.12.1
Implementation Process for Identification of Critical PRA Operator Actions WCAP-14651, "Integration of Human Reliability Analysis with Human Factors Engineering Design Implementation Plan," Rev 2	No	18.12.2
Remote Shutdown Workstation Displays, Alarms, and Controls	No	18.12.3

Table 1-1 (Cont.)
Index of AP1000 Tier 2 Information Requiring NRC Approval for Change

Item	Expiration at First Full Power	Tier 2 Reference
WCAP-14651, "Integration of Human Reliability Analysis with Human Factors Engineering Design Implementation Plan," Rev 2	No	18.12.5
Piping Design Analysis Criteria (DAC)	Resolved	

Table 1-2
Piping Design Acceptance Criteria

The piping design acceptance criteria is resolved as summarized in APP-GW-GLR-013 (Reference 1). Table 1-2 not used.